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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/925,937	08/09/2001	Kurudi H. Muralidhar	7287-000017	4932

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EXAMINER

BROSS, EDWARD J

ART UNIT	PAPER NUMBER
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2126

DATE MAILED: 05/07/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/925,937

Applicant(s)

MURALIDHAR ET AL.

Examiner

Edward Bross

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 January 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. Claims 1-20 are pending in this application.

#### *Specification*

2. The disclosure is objected to because of the following informalities: On page 2, line 14, "configures" should read "configure".

Appropriate correction is required.

#### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 1-8 and 10-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maxwell (5,508,909) in view of Warman (5,657,221).

5. As to claims 1 and 10, Maxwell discloses a system for cloning input/output (I/O) devices connected to a network of an industrial control system (abstract), comprising:

a first network (Fig. 10; col. 9, lines 36-54);

a plurality of I/O devices connected to said first network (controller Fig. 10; Fig. 9); and

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a master computer coupled to said first network and including control software (24 Fig.

1).

6. Maxwell does not disclose the control software has an object oriented model for defining one of attributes, parameters and operations of said I/O devices to allow cloning of at least one of said devices.

7. Warman discloses control software has an object oriented model for defining one of attributes, parameters and operations of said I/O devices to allow cloning of at least one of said devices (Fig. 9A).

8. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the object oriented control software of Warman in the controller of Maxwell in order to gain the ease of use of the graphical control of Warman (col. 3, lines 1-14).

9. As to claims 2 and 11, Warman discloses said object oriented model includes a hierarchical class structure with inheritance properties (Fig. 9A).

10. As to claims 3 and 12, Warman discloses said hierarchical class structure includes a device class (106 Fig. 9A).

11. As to claims 4 and 13, Warman discloses said devices class includes a plurality of device types (col. 14, lines 59-60).

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12. As to claims 5 and 14, Warman discloses said object oriented model includes at least one class level hierarchically below said device class (col. 14, lines 61-64).

13. As to claims 6 and 15, Warman discloses that devices instantiated at said at least one class level inherit said one of said attributes, parameters and operations of said at least one class level and a device type of said device class from which said t least one class level depends (col. 17, lines 27-41).

14. As to claims 7 and 16, Warman discloses said device types include at least one of analog and digital devices (col. 14, lines 59-53 amplifier and CD player).

15. As to claims 8 and 17, Warman discloses said control software includes a graphical user interface for interfacing said control software and cloning said I/O devices (Fig. 6).

16. Claims 9 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maxwell (5,508,909) in view of Warman (5,657,221) as applied to claims 1 and 10 above, and further in view of Moon (4,646,226).

17. As to claims 9 and 20, Maxwell and Warman do not disclose said I/O devices include at least one of barcode readers, sensors, actuators, and motor starters.

18. Moon discloses an I/O devices including actuators (abstract).

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19. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the actuator system of Moon with the controller of Maxwell and object oriented control software of Warman in order to “provide a system and process for quickly, accurately, and efficiently determining the tuning constants with minimal disturbance of the controlled process” (col. 2, lines 19-22).

20. As to claim 18, Maxwell discloses said first and second networks are connected by a gateway (Controller Fig. 9 is a by definition a gateway as it bridges two networks, 194 and 196).

21. As to claim 19, Maxwell discloses said first and second networks are different types of networks (Fig. 9).

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward Bross whose telephone number is 305-8754. The examiner can normally be reached on Mon-Fri 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Meng-Ai An can be reached on 305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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